

Revere

## National Weather Service Storm Data and Unusual Weather Phenomena



June 1998 Time Local Path Length Path Number of Estimated Persons Width Damage **CONNECTICUT**, Northeast Windham County Putnam 1330EST 0500EST 0 0 Flood CTZ002 Hartford 1330EST Flood 16 20 0130EST The Five Mile River in Putnam, in Windham County (a small stream), was in flood from 2:30 PM on June 14th through 6 AM on June 15th. The Connecticut River reached flood stage of 16 feet at Hartford at 2:30 PM on June 16th, crested at 17.30 feet at 8 PM on the 18th, then fell below flood stage at 2:30 AM on June 20th. **Tolland County** Stafford Spgs 0 18 1830EST 0 Heavy Rain A portion of Route 190 was closed for 30 minutes due to street flooding, common for that location. Windham County Windham 20 1315EST 0 Hail(1.00) A severe thunderstorm produced one inch diameter hail in Windham. A report of nickel size hail was received from the neighboring town of Scotland. **Hartford County** Southington 30 Flood 2359EST **Hartford County** Hartford 30 0 0 Flood An area of heavy showers and thunderstorms associated with a slow moving warm front brought 2 to 4 inches of rainfall, resulting in urban street, basement, small stream, and river flooding in Hartford County. The Quinnipiac River, a small stream, reached flood stage of 3.5 feet in Southington at 6:10 PM on June 30th, crested at 4.24 feet at 8:39 PM, and continued in flood through midnight. The South Branch of the Park River, a small stream in Hartford, reached flood stage of 9 feet at 9:45 pm on June 30th, crested at 9.85 feet at 10:30 PM, and continued in flood through midnight. Also at 9:45 PM, in West Hartford, the Trout Brook went over its banks flooding nearby areas. Urban street flooding was reported with water four feet deep on Pen Drive and one foot deep in some other areas. **MASSACHUSETTS, Central and East Norfolk County** 0015EST 60K **Braintree** Lightning Lightning struck and started a fire in a two-story Cape-style home. Damage was estimated at \$60,000. There were no injuries **Hampden County** Granville Dime size hail was reported in Granville during a late evening thunderstorm. Farther east, a thunderstorm wind gust to 43 mph was reported in Hardwick in Worcester County. MAZ004>007-012>017-Northern Worcester - Western Middlesex - Western Essex - Eastern Essex - Southern Worcester - Western Norfolk -Southeast Middlesex - Suffolk - Eastern Norfolk - Northern Bristol - Southern Bristol 0000EST **Heavy Rain** 13 14 1200EST **Suffolk County** 

A lightning strike resulted in a hotel fire in Revere. Damage estimated.

20K

Lightning





June 1998 Path Length (Miles) Time Local/ Number of Persons Path Width Estimated Damage **MASSACHUSETTS, Central and East** MAZ005-005-005>006-Western Middlesex - Western Essex - Western Norfolk 006-013-013 13 23 1345EST 2300EST 0 570K Flood Maynard **Norfolk County** 1400EST 1600EST Walpole 0 0 570K Flood Mine Brook **Norfolk County** 1400EST 1600EST 570K Flood Walpole 0 0 Spring Brook **Norfolk County** 1400EST 1600EST Walpole 0 0 570K Flood Diamond Brook **Suffolk County** 1500EST 1100EST **Boston** 0 0 570K Flood Muddy River **Essex County** 570K Lynnfield 13 1542EST 0 0 Flood Pillings Pond **Norfolk County East Walpole** 1547EST 1500EST 0 0 570K Flood Traphole Brook Middlesex County Wakefield 1555EST 0 570K Flood Crystal Lake **Essex County** 13 1600EST 0 0 570K Flood Georgetown Parker River Middlesex County Littleton 13 1700EST 570K Flood Beaver Brook **Norfolk County** Walpole 13 1700EST 0 0 570K Flood Tributary to Traphole Brook **Norfolk County** Franklin 13 1725EST 570K Flood Mill Brook **Worcester County** 1800EST 1500EST Northborough 0 0 570K Flood West Branch of the Assabet River **Norfolk County** 1900EST 0700EST Bellingham 0 0 570K Flood

Peters Brook





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Numbe Perso Killed	r of ns Injured	Estimated Damage Property Crops	Character of Storm	June 1998
MASSACHUSETTS, O									
Middlesex County Winchester	13 16 Aberjo	2100EST 1100EST ona River			0	0	570K	Flood	
Middlesex County Arlington	13 16 Alewin	2200EST 0900EST fe Brook			0	0	570K	Flood	
Middlesex County Medford	13 16 Mystic	2215EST 1200EST			0	0	570K	Flood	
Bristol County Somerset	13 Buffin	2300EST agton Brook			0	0	570K	Flood	
Bristol County Norton	14 15 Wadin	0000EST 0700EST ag River			0	0	570K	Flood	
Middlesex County Wilmington to Tewksbury	14 18 Shaws	0500EST 1200EST heen River			0	0	570K	Flood	
Middlesex County Waltham	14 15 Lower	0700EST 0600EST Charles River			0	0	570K	Flood	
Essex County Peabody	14 Procte	0845EST r and Goldwaithe	Brooks		0	0	570K	Flood	
Essex County Lawrence	14 18 Shaws	1200EST 1600EST theen River			0	0	570K	Flood	
Bristol County Attleboro	14 15 Three	1230EST 1700EST Mile River			0	0		Flood	
Bristol County Taunton	14 16 Ten M	1340EST 1700EST lile River			0	0		Flood	
Essex County Methuen	14 Spicke	1700EST et River			0	0		Flood	
Bristol County Rehoboth to Swansea	14 15 Palme	2300EST 0100EST r River			0	0		Flood	
Middlesex County Waltham	15 16 Lower	0715EST 1200EST Charles River			0	0		Flood	





June 1998

Yi	Dete	Time Local/	Path Length	Path Width	Numb Pers	ons	Estin Dan	nage	Classication of Chairman	Julie 1990
Location	Date	Standard	(Miles)	(Yards)	Killed	Injured	Property	Crops	Character of Storm	
MASSACHUSETTS.	<u>, Central</u>	and East								
<b>Middlesex County</b>										
Waltham	15 16	1430EST 0400EST			0	0			Flood	
	Lowe	r Charles River								
<b>Essex County</b>										
Ipswich	15 17	2200EST 1100EST			0	0			Flood	
	Ipswi	ch River								
Middlesex County										
Waltham	16	0730EST 1200EST			0	0			Flood	
	Lowe	r Charles River								
<b>Worcester County</b>										
Gardner	16	0800EST			0	0	15K		Lightning	

On June 12th through the 14th, a very slow moving complex storm system moved through southeast New England. The combination of its slow movement and the presence of tropical moisture across the region produced rainfall of 6 to 12 inches over much of eastern Massachusetts, which led to widespread urban, small stream, and river flooding. During the period from June 15th through the 20th, the slow moving upper level system continued to set off afternoon thunderstorms which moved very slowly in the weak upper level wind flow. Several flash flood events occurred. The flooding resulted in a Presidential Disaster Declaration in the following Massachusetts counties: Essex, Middlesex, Norfolk, Suffolk, and Bristol. Dollar damage has been established at \$13,000,000.

A flash flood situation developed when torrential rain fell on June 13th producing 5 to 8 inches of rainfall in less than 12 hours. Urban and poor drainage flooding began around mid-day and small stream flooding began about mid-afternoon. Second and third waves of heavy rainfall followed by the evening of June 14th, producing an additional 2 to 4 inches. Many rivers and streams reached 50 to 75 year return period elevations. However, despite the magnitude of flooding that did occur, most streams climbed to only 1 to 2 feet above their respective flood stages. The total dollar damage figure was not nearly as great as what occurred from the October, 1996 floods, which caused more than \$64 million damage to the Boston Metropolitan rail system alone.

While significant flood damage to the Boston Metro area public transportation was averted, water did force the closing of much of the subway transit system and commuter rails in Greater Boston, forcing many commuters to use bus transportation. Dozens of roads and highways were flooded and cars stalled in waist-deep muddy water. About 12,000 electric customers lost power during the heavy rain.

The first reports of small stream flooding occurred when the Spring, Diamond, and Mine Brooks overflowed their banks in Walpole. In Boston, the Muddy River was in flood at 4 PM and it remained several feet out of its banks as late as 11:30 PM. The subway system in a part of Boston was flooded. Flooding occurred during the late afternoon in Lynnfield in Essex County when Pillings Pond overflowed its banks. Cars were reported stalled on flooded roads. In Norfolk County, in Walpole, Traphole Brook overflowed and flooded two houses. A tributary to Traphole Brook flooded Francis William Park and adjacent homes. In Middlesex County, in Wakefield, Crystal Lake rose to bankfull and required sandbagging. In Littleton, Beaver Brook overflowed its banks and flooded local property there.

During the evening hours of June 13th, small stream flooding continued along several streams in Middlesex, Norfolk, and Bristol Counties. In Norfolk County, in Franklin, the Mill Brook flooded homes while other brooks and streams were in flood. In Middlesex County, the Aberjona River was reported out of its banks in Winchester; the Alewife Brook flooded a portion of Route 16 in Arlington; and the Mystic River rose out of its banks in Medford. In Bristol County, in Somerset, the Buffington Brook flooded a portion of Route 128.

During the morning of June 14th, the small stream flooding continued. In Bristol County, in Norton, the Wading River was in flood, based on a gage report. In Middlesex County, in Wilmington, the Shawsheen River was in flood based on gage reports and in Waltham, flooding occurred along the Lower Charles River. In Essex County, in Peabody, flooding occurred along the Procter and Goldwaith Brooks, with significant street flooding reported in several areas. By 1 PM in the early afternoon of the 14th, flooding was reported in Lawrence in Essex County along the Shawsheen River and a portion of Route 114 was flooded.

The following are the reports of flooding along the larger rivers. The Neponset River at Norwood reached flood stage of 9 feet at 2:45 PM on June 13th, crested at 10.87 feet at 10:15 AM on the 14th, and fell below flood stage at 4 AM on June 17th. The Charles River at Dover reached flood stage of 5 feet at 9 AM on June 15th, crested at 6.8 feet at 8 PM on the 18th, and fell below flood stage at 9:40 PM on June 19th. The Assabet River at Maynard reached flood stage of 5 feet at 1 PM on June 14th, crested at 5.49 feet at 5 AM on the 15th, and fell below flood stage at 3 AM on June 17th. The Nashua River at East Pepperell reached flood stage of 8 feet at 2 PM on June 15th, crested at 8.23 feet at 2 AM on the 16th, and dropped below flood stage at 2:30 PM on the 16th. The Ipswich





Time Path Path Number of Estimated Local/ Length Width Persons Damage

Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

#### MASSACHUSETTS, Central and East

River in Ipswich in Essex County reached flood stage of 7 feet at 11 PM on June 15th, crested at 7.20 feet at noon on the 17th, then fell below flood stage at 10 PM on June 18th. On June 16th, the following reports were received for towns in Middlesex, Essex, and Worcester Counties. In Malden, the Malden River was in flood at 8:15 AM; in Winchendon at 8:30 AM, the Aberjona River was still over its banks, but receding; in Methuen at 8:40 AM, the Spicket River was still in flood and evacuations had occurred downstream to Lawrence and the river was still rising. In Lawrence, officials evacuated about 60 people from flooded multi-family homes in a four block area after power and natural gas had been turned off for safety reasons. Also, on June 16th, in Tewksbury at 8:45 AM, the Shawsheen River was in flood and numerous road closures were reported in surrounding towns. In South Tewksbury, three roads were flooded along with many homes and businesses. One bridge was knocked out by the flooding. On June 16th, in Bristol County, the following small streams were flooded: in Taunton at 9:30 AM, the Taunton River was out of its banks flooding West Water Street; in Attleboro at 9:40 AM, the Three Mile River was still out of its banks with numerous road closures; in Norton at 9:45 AM, the Wading River was still over its banks.

The Concord River at Lowell reached flood stage of 8 feet at 5 AM on June 17th, crested at 8.05 feet at 10 AM on June 18th, and fell below flood stage at midnight at the end of the day on June 20th. The Merrimack River at Lowell reached flood stage of 52 feet at 8 AM on June 17th, crested at 52.8 feet at 1 AM on the 18th, the fell below flood stage at 7 PM on the 18th. The Merrimack River at Lawrence reached flood stage of 20 feet at 6 PM on June 17th, crested at 21 feet at 1 AM on the 19th, and fell below flood stage at 6 AM on the 19th. The Merrimack River at Haverhill reached flood stage of 15 feet at 5 AM on June 18th, crested at 15.8 feet at 2 PM the same day, then fell below flood stage at 8 PM on the 18th.

On June 16th, in Worcester County in Gardner, a bolt of lightning started a fire which caused \$15,000 damage to a garage. Damage estimates for the city of Boston ranged from \$9 to \$17 million in total property damage and about 10,000 homes were reporting moderate to minor damage, according to the Massachusetts Emergency Management Agency. Another \$1 million damage was done to roads and \$150,000 damage to school buildings.

Worcester County
Westborough
Norfolk County
Milton to Braintree
Norfolk County
Wellesley

18	1440EST	0	1	Lightning
18	1600EST 1640EST	0	0	Heavy Rain
18	1700FST	0	0	Heavy Rain

One person was struck and slightly injured by lightning in Westboro, in Worcester County, during an afternoon thunderstorm. A late afternoon thunderstorm produced a torrential downpour in several towns in eastern Norfolk County. The Blue Hill Observatory in Milton recorded 3.02 inches of rain in just 36 minutes ending at 5 PM. A total of 3.36 inches of rain was recorded for the afternoon storm and this brought the total rainfall from June 12th through the 18th to 12.16 inches. Many roads were flooded in the western part of Milton. In Randolph, where Route 28 and Route 139 were flooded, an observer reported 2.25 inches in 40 minutes. In Braintree, Route 3 was flooded in both directions while in Quincy, Route 37 was also flooded in both directions. In Wellesley Hills, Route 9 was flooded and a spotter reported 2.35 inches of rain in 35 minutes. Up to 5,000 electric customers lost power in the Quincy-Milton area for up to 2 hours. Another 3,000 electric customers lost power in Randolph

Norfolk County Foxborough	19	1333EST	0	0	Hail(0.88)
Bristol County Taunton	19	1340EST	0	0	Hail(0.75)
Bristol County Taunton	19	1405EST	0	0	Thunderstorm Wind (G50)
Worcester County Douglas	19	1530EST	0	0	Flood

A severe thunderstorm produced large hail in Bristol and Norfolk Counties. In Norfolk County, nickel size hail was reported in Foxboro, and in Bristol County, dime size hail was reported in Taunton. Trees and wires were downed in Taunton. In Douglas, in Worcester County, flooding closed a road when a reservoir overflowed.





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Numbe Perso Killed	er of ons Injured	Estimated Damage Property Crops	June 1998  Character of Storm
MASSACHUSETTS, C			(IIII65)	(Taras)	Timod	mared	Troperty Crop.	S. C.
Worcester County Barre	20	1430EST			0	0		Hail(0.75)
Hampshire County Plainfield	20	1437EST			0	0		Hail(0.75)
Franklin County Ashfield	20	1445EST			0	0		Hail(0.88)
Worcester County Brookfield	20	1510EST			0	0		Hail(0.75)
Franklin County Wendell	20	1520EST			0	0		Hail(0.75)
Franklin County								
Hawley	20	1605EST 1630EST			0	0	75K	Flash Flood
	Brookf Frankli 3 hour	ield in Worces n County, in th	ter County. In e town of Haw	Franklin Cou ley, a torrentia	inty, nickel s al downpour	size hail f resulted i	ell in Ashfield an n a flash flood eve	chusetts. Dime size hail fell in Barre and d dime size hail fell in Wendell. Also, Irent. Radar estimated rainfall of 5 inches in washed out. A state of emergency was
Norfolk County								
Wellesley	were re		long with 3 uti	lity poles. Se				Thunderstorm Wind (G50) k County. Twenty one-inch diameter trees d branches. The most severe damage was
Barnstable County Marstons Mills	<b>26</b> Dime s	1115EST ize hail was rep	ported in Marsi	tons Mills in I	<b>0</b> Barnstable C	<b>0</b> ounty (Ca	pe Cod).	Hail(0.75)
<b>Bristol County</b>								
North Dartmouth	26	1646EST			0	0		Thunderstorm Wind (G50)
Bristol County New Bedford to Fairhaven	26	1705EST 1720EST			0	0		Hail(0.75)
Bristol County Acushnet	26	1730EST			0	0		Thunderstorm Wind (G60)
<b>Barnstable County</b>								
Sandwich	Cape C	Cod. Thunders	storm winds d	owned large	imbs, branc	hes, and		Thunderstorm Wind (G50) ea in Bristol County to the western part of orth Dartmouth and Acushnet in Bristo airhaven
Plymouth County								
Mattapoisett	26 Trees a	1720EST and power lines	were reported	down in Matt	0 apoisett at 6	<b>0</b> 20 PM, po	er the local police	Thunderstorm Wind (G50) department.
MAZ007-015-019-021>022	Eastern 27	1300EST 1900EST	lk - Eastern P	lymouth - So	uthern Plyr 0	nouth - B 1	arnstable 10K	Strong Winds
	North	k door" cold fro winds gusting b	between 35 and	d 47 mph occ	urred in the	wake of t	he front and raise	the south coast, Cape Cod, and the Islands and havoc with small craft up and down the

coast. A peak gust to 47 mph was reported from Wareham. In Boston Harbor, a sailing vessel was dismasted and several boats





Time Path Path Number of Estimated June 1998
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

### **MASSACHUSETTS, Central and East**

were blown from their moorings. A person was injured off of Hull due to excessive rolling of the boat. In Gloucester, a sailboat was blown onto the rocks. On Cape Cod, in Woods Hole, many boats were blown from their moorings and off the coast of Falmouth, 16 people had to be rescued after their boats capsized. In Chatham a small boat capsized, resulting in a person being thrown into the water. Two small boats were blown onto a breakwater. In Provincetown, a sailboat was blown onto a breakwater.

Bristol County Fairhaven	30	2100EST 2115EST	0	0	Hail(1.00)
Bristol County South Dartmouth	30	2110EST	0	0	Hail(0.75)
Plymouth County Mattapoisett	30	2115EST	0	0	Hail(1.00)
Bristol County Fairhaven	30	2118EST	0	0	Thunderstorm Wind (G70)
Bristol County Fairhaven	30	2120EST	0	0	Hail(0.88)
Plymouth County Wareham to Onset	30	2125EST	0	0	Hail(1.00)
Barnstable County Bourne to Sandwich	30	2131EST	0	0	Hail(1.00)
Barnstable County Barnstable	30	2147EST	0	0	Hail(0.75)

A severe thunderstorm (supercell) which produced baseball size hail in Rhode Island moved eastward along the south coast of Massachusetts onto Cape Cod producing large hail and one report of damaging winds. There was wind damage in Bristol County, in Fairhaven, caused by straight-line downburst winds. Meteorologists from the National Weather Service surveyed the damage and estimated the wind gusts to have ranged from 75 to 85 mph. The emergency management director for the town of Fairhaven reported a wall blown down and the roof of a building blown off. Numerous trees were blown down near the site where the roof was blown off. In Bristol County, dime to one inch size hail fell in Fairhaven, and dime size hail fell in South Dartmouth. Large branches were reported down in Dartmouth. One inch size hail was reported from Mattapoisett and Onset in Plymouth County. On Cape Cod, one inch size hail was reported from Bourne and Sandwich, and dime size hail fell in the town of Barnstable.

### **NEW HAMPSHIRE, Southern**

Cheshire County Nelson	03	0030EST	0	0	Thunderstorm Wind (G50)
		nderstorm just after midnight brought damagi ed blown down and small hail occurred. Time	_	•	Trees, limbs, and telephone poles were
Hillsborough County					
Pelham	14 15	1500EST 0700EST	0	0	Flood
NHZ012	Hillsb	orough			

0

The Beaver Brook in Pelham reached flood stage at 4 PM on June 14th and continued in flood through 8 AM on June 15th. The Merrimack River reached flood stage of 11 feet at Goffs Falls at 9 PM on June 16th, crested at 12.45 feet at 7 PM on June 17th, then dropped below flood stage at midnight at the end of the day June 18th.

0

Flood





June 1998 Path Length (Miles) Number of Persons led Injure Estimated
Damage Path Width (Yards Time Local/

NEW HAMPSHIRE,	Souther	<u>n</u>					
Hillsborough County Manchester	<b>19</b> A chii	1416EST mney exploded on a row	house in Manchester se	<b>0</b> nding bric	<b>0</b> ks flying (	<b>5K</b> to earth, dama	<b>Lightning</b> ging a parked van and another vehicle
RHODE ISLAND							
Bristol County Countywide	13 14	0000EST 1200EST		0	0		Heavy Rain
Kent County Countywide	13 14	0000EST 1200EST		0	0		Heavy Rain
Newport County Countywide	13 14	0000EST 1200EST		0	0		Heavy Rain
Providence County Countywide	13 14	0000EST 1200EST		0	0		Heavy Rain
Washington County Countywide	13 14	0000EST 1200EST		0	0		Heavy Rain
Providence County Glocester	13 Ponag	1425EST ganset Pond		0	0		Flood
Providence County South Foster	13 14 Ponag	1845EST 0300EST ganset River		0	0		Flood
Providence County Woonsocket	13 14 Case I	2345EST 1600EST Pond		0	0		Flood
Providence County South Foster	14 Ponag	0700EST 1800EST ganset River		0	0		Flood
Kent County Warwick	14 16 Pawtu	0739EST 0700EST uxet River		0	0		Flood
Providence County North Providence	14 15 Woon	0830EST 0700EST asquatucket River		0	0		Flood
Providence County Cranston	14 16 Pawtu	0900EST 1100EST uxet River		0	0		Flood
RIZ001	14 15	west Providence 2000EST 1000EST	144	0	0	avatom e	Flood

On June 12th through June 14th, a very slow moving complex storm system moved through southeast New England. The combination of its slow movement and the presence of tropical moisture across the region produced rainfall of 6 to 8 inches over





Time Path Path Number of Estimated June 1998
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

#### **RHODE ISLAND**

much of Rhode Island. The heaviest rainfall amounts of 7 to 8 inches occurred in the northeast corner of the state in Providence County. Numerous small streams flooded over their banks. The following is a list of those reported to have flooded:

On June 13th, in Glocester, in Providence County, the Ponaganset Pond flooded over at 3:25 PM; the Ponaganset River in South Foster reached flood stage of 5 feet at 7:45 PM, crested at 5.3 feet at 10 PM, then fell below flood stage at 4 AM on June 14th. Then, it flooded again at 8 AM on the 14th, crested at 5.3 feet at 1 PM, then fell below flood stage at 7 PM -- all on June 14th. Case Pond in Woonsocket flooded from 12:45 AM on the 14th till 5 PM the same day. The Woonsaquatucket River in North Providence was in flood from 9:30 AM on the 14th until 8 AM on the 15th. The Pawtuxet River was above flood stage at Warwick in Kent County from 8:39 AM on June 14th until 8 AM on the 16th. Only minor flooding occurred along one major river -- the Blackstone. The Blackstone River reached flood stage of 9 feet at Woonsocket at 9 PM on the 14th, crested at 9.17 feet at 6 AM on the 15th, then fell below flood stage at 11 AM later that same morning.

Washington County North Kingstown	19	1354EST	0	0	Hail(0.75)
Providence County Scituate	19	1420EST	0	0	Thunderstorm Wind (G50)
Kent County Coventry	19	1605EST	0	0	Flood
Kent County West Greenwich	19	1645EST	0	0	Hail(0.75)

Severe thunderstorms produced large hail and damaging winds in a few towns in Washington, Kent, and Providence Counties. Dime to nickel size hail was reported from North Kingstown in Washington County. Two trees were blown down in Scituate in Providence County and dime size hail fell in West Greenwich in Kent County. In addition, flooding occurred in coventry in Kent County, when streams flowing into Johnston Pond overflowed their banks

#### RIZ004>007

### Eastern Kent - Bristol - Washington - Newport

27	1400EST	0	0	Strong Winds
	1900EST			· ·

A "back-door" cold front moving south across Narragansett Bay and the coastal waters raised havoc with many small craft. A sudden wind shift to the north occurred with the passage of the front and winds gusted to 35 to 45 mph for many hours after the frontal passage. This resulted in the capsizing of numerous small boats in Narragansett Bay. The Coast Guard responded to many distress calls. At Point Judith, it was the fastest change in wind direction/speed in recent memory. Sailboats capsized in Great Salt Pond on Block Island. No injuries were reported.

Providence County Providence	30	1330EST	0	0	Flood
Providence County North Providence	30	1910EST 2359EST	0	0	Flood
Washington County Richmond	30	2019EST 2020EST	0	0	Hail(2.75)
Washington County North Kingstown	30	2035EST	0	0	Hail(0.75)
Bristol County Barrington	30	2045EST	0	0	Hail(0.88)

A slow moving warm front with an abundance of tropical moisture produced several hours of torrential rain with amounts totaling 3 to 6 inches during the morning and early afternoon. Showers and thunderstorms produced the torrential rainfall across northern Rhode Island. The Louisquisset River in Providence came out of its banks at 2:30 PM. During the evening, more thunderstorm activity produced flooding in Smithfield and North Providence when the Woonasquatucket River overflowed its banks flooding low-lying sections. A severe thunderstorm (supercell) brought large hail during the evening. Baseball size hail was reported in Richmond, while dime size hail fell in Exeter and North Kingstown. The same storm also produced nickel size hail in Barrington. Two telephone poles were reported down in Ashaway, although there were no other reports of strong winds.